

# ***Staff Paper***

## **Analysis of Socioeconomic Data for the Value Added Agriculture Cluster of Michigan Counties**

**Jon C. Phillips**  
**Graduate Research Assistant**

**STAFF PAPER #98-44**

**DECEMBER 1998**



**Department of Agricultural Economics**  
**MICHIGAN STATE UNIVERSITY**  
**East Lansing, Michigan 48824**

MSU is an Affirmative Action/Equal Opportunity Institution

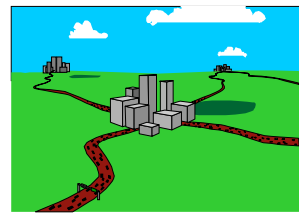
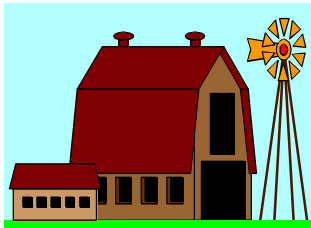
Analysis of Socioeconomic Data for the Value  
Added Agriculture Cluster of Michigan Counties

Jon C. Phillips  
philli13@pilot.msu.edu

11 pages

Dec. 15, 1998 (Ver. 1.0)

# Analysis of Socioeconomic Data for the Value Added Agriculture Cluster of Michigan Counties



By Jon C. Phillips

Graduate Research Assistant, Department of Agricultural Economics, M.S.U.

“Enhancing Rural Economies Through Comprehensive Extension Research & Partnering Approaches  
Using Multi-County Clusters in Michigan With Application to National Rural Settings”, a United States  
Department of Agriculture Fund for Rural America Grant

This grant is administered by the Department of Agricultural Economics, Michigan State University, Dr. Colletta Moser, Project Director; Dr. Raymond Vlasin, Project Co-Director. For further information about the grant, contact Dr. Paul Wessen, Project Manager, (517)353-5946.

# Analysis of Socioeconomic Data for the Value Added Agriculture Cluster of Michigan Counties<sup>1</sup>

## ***Abstract***

*This paper presents an analysis of socioeconomic data for a cluster of three counties in central Michigan. These adjacent counties (Gratiot, Mecosta, and Montcalm) are part of a three-year rural development project. Data for individual counties as well as averages for the cluster are given. Topics covered include population growth, age of residents, educational attainment, unemployment, employment/jobs, sources of personal income, household income, poverty rates, and household composition. An executive summary is also provided.*

## ***Executive Summary***

Following is an analysis of socioeconomic data for the Value Added Agriculture Cluster of Michigan counties, i.e. Gratiot, Mecosta, and Montcalm. These counties were combined into a group for a Michigan State University economic development project. The project, called Enhancing Rural Economies, involves concentrating extension programming and research programs, as well as using partnering approaches to improve economic conditions in local areas. The key findings of this analysis are listed below.

### **Population Growth:**

All three cluster counties experienced an increase in population between 1990 and 1996. Montcalm's increase was much greater than that of Gratiot and Mecosta, however.

### **Age of Residents:**

The cluster tends to be increasing in the older categories of population. The cluster average median age is expected to increase by 2000, although not as much as for Michigan as a whole.

### **Educational Attainment:**

The residents of this cluster are well educated. The cluster average educational attainment is very close to that of Michigan as a whole. During the 1980s, there was a healthy increase in the percentage of persons (age 25 and over) who graduated from high school in all three cluster counties.

---

<sup>1</sup> This analysis was prepared by Jon C. Phillips, Graduate Research Assistant, Department of Agricultural Economics, M.S.U. Data for this analysis was organized and provided by Mary Lou McPherson, Extension Specialist, Department of Resource Development. Additional information pertaining to the operation of the Southern Tier Cluster of the Enhancing Rural Economies project may be obtained from Don Smucker, Cluster Administrator, M.S.U. Extension Montcalm County, (517)831-7500.

## **Unemployment:**

All three counties in this cluster have shown a steady, marked decrease in unemployment since the last recession, which ended in 1991. Montcalm's unemployment rate, however, remains stubbornly above that of Michigan. Many of the townships in Mecosta, on the other hand, had low rates of unemployment in 1997.

## **Employment/Jobs:**

Each of the counties in this cluster added jobs between 1990 and 1996. The cluster average percentage change in number of jobs during this period was over five percentage points greater than the corresponding statistic for Michigan as a whole.

## **Sources of Personal Income:**

The percentage of personal income from net earnings in the cluster is lower than the corresponding figure for the state of Michigan. Conversely, the percentage of personal income in the cluster from dividends, interest, and rent in the cluster is higher than the corresponding figure for the state of Michigan.

## **Household Income:**

A general conclusion of an examination of household income in the Value Added Agriculture Cluster is that it is a low income area. This conclusion is based in part on a comparison of the income distribution of the cluster with that of the state of Michigan.

## **Poverty Rate:**

The poverty rate is higher in the cluster than the average for Michigan. The cluster average poverty rate actually exceeds Michigan's poverty rate by 38.1%.

## **Household Composition:**

For nearly every county in the cluster, the percentage of household in the categories "Married, With Children" and "Married, Without Children" decreased over this period.<sup>2</sup> Another trend stands out from the table. The percentage in each of the other categories increased in each cluster county during this period.<sup>3</sup>

A more detailed discussion of each of the variables mentioned above follows.

---

<sup>2</sup> The only exception was Gratiot, which exhibited a slight increase in the percentage of households in the "Married, Without Children" category over this period.

<sup>3</sup> The other categories are: Single Parent Family, Other Family Household, Single Person Household, and Other Non-family Household.

## Analysis of Socioeconomic Data for the Value Added Agriculture Cluster of Michigan Counties<sup>4</sup>

Following is an analysis of socioeconomic data for the Value Added Agriculture Cluster of Michigan counties, i.e. Gratiot, Mecosta, and Montcalm. These counties were combined into a group for a Michigan State University economic development project. The project, called Enhancing Rural Economies, involves concentrating extension programming and research programs, as well as using partnering approaches to improve economic conditions in local areas.

### *Population*

Population levels, and changes therein, provide clues to the economic well being of a region. Table 1 provides population change information for the Value Added Agriculture Cluster, Michigan, and the United States. Montcalm is quite a bit more populous than the other two counties in this cluster, Gratiot and Mecosta. It also has over triple the growth rate of population compared to the other two. This may be a result of the Grand Rapids metro area expanding into Montcalm. In fact, over half of the population growth in the county between 1970 and 1996 occurred in five townships in southern and western Montcalm.<sup>5</sup>

The population of Gratiot was actually higher in 1980 than it was in 1996 (40,448 residents vs. 39,978 residents). A stagnant or declining population is often a symptom of a lack of economic opportunity, as people tend to migrate when they have trouble finding a job. Mecosta, on the other hand, gained slightly in population over the same period.<sup>6</sup>

### *Age of Residents*

All three counties tend to be increasing in the older categories of population. Table 2 provides median age data for the Value Added Agriculture Cluster and Michigan for 1990 and 2000 (projected). Median age is one measure of how old the residents of an area are. As shown in the table, the cluster average<sup>7</sup> median age is expected to increase by 2000, although not as much as for Michigan as a whole.

<sup>4</sup> This analysis was prepared by Jon C. Phillips, Graduate Research Assistant, Department of Agricultural Economics, M.S.U. Data for this analysis was organized and provided by Mary Lou McPherson, Extension Specialist, Department of Resource Development. Additional information pertaining to the operation of the Southern Tier Cluster of the Enhancing Rural Economies project may be obtained from Don Smucker, Cluster Administrator, M.S.U. Extension Montcalm County, (517)831-7500.

<sup>5</sup> From 1970 to 1996, the population in Montcalm increased by 11,414 persons, from 47,555 to 58,969. Following are the townships with the largest increase in population during this period, and their respective population increases: Bloomer (2,407), Reynolds (976), Eureka (869), Montcalm (777), and Pierson (718).

<sup>6</sup> Mecosta had 36,961 residents in 1980 and 38,460 residents in 1996.

<sup>7</sup> The cluster average was calculated by taking an arithmetic average of the median age in each of the three cluster counties. This same method is used to calculate cluster averages throughout the report.

**Table 1: Population Changes for the Value Added Cluster, Michigan, and the United States**

Population				
County	1990	1996	Raw Change	% Change
Gratiot	38,982	39,987	1,005	2.6%
Mecosta	37,308	38,460	1,152	3.1%
Montcalm	53,059	58,969	5,910	11.1%
Cluster Total	129,349	137,416	8,067	6.2%
Michigan				3.2%
U.S.				6.6%

Except for Mecosta (due to the presence of Ferris State University), the counties tend to lack residents aged between 18 and 24 years. Gratiot, in particular, has shown a decrease in people of this age. Such a phenomenon will have an impact on the labor supply in the area. Specifically, this tends to create a bimodal distribution of workers with respect to age and skills. In other words, there will be a group of younger, less skilled workers and a group of older, more highly skilled workers. Employers who require workers with more skills and experience than the younger workers possess (but not as much as the older workers possess) may find it difficult to find appropriate applicants.

### *Educational Attainment*

The educational attainment of residents of a region is an important factor in determining its potential for economic development. Educational attainment is frequently measured by the percentage of persons in a region, age 25 and over, who have graduated from high school, who have some college background, and have obtained a four-year college degree (or higher). This educational attainment information is given for the Value Added Agriculture Cluster and Michigan in Table 3. As indicated, the residents of this cluster are well educated. The cluster average educational attainment is very close to that of Michigan as a whole. In particular, during the 1980s there was a healthy increase in the percentage of persons (age 25 and over) who graduated from high school in all three cluster counties. This indicates that there is an adequate pool of potential employees with basic skills that new or expanding businesses can draw upon.

**Table 2: Median Age Information for the Value Added Cluster and Michigan.**

Median Age (years)				
County	1990	1,996	Raw Change	% Change
Gratiot	32.6	35.3	2.7	8.3%
Mecosta	25.5	25.0	-0.5	-2.0%
Montcalm	32.2	34.8	2.6	8.1%
Cluster	30.1	31.7	1.6	5.3%
Michigan	32.5	35.3	2.8	8.6%

**Table 3: Educational Attainment for the Value Added Cluster and Michigan**

County	High School Grad		Some College		College+	
	<u>1980</u>	<u>1990</u>	<u>1980</u>	<u>1990</u>	<u>1980</u>	<u>1990</u>
Gratiot	69.4%	77.1%	11.8%	23.8%	11.1%	10.9%
Mecosta	69.6%	77.7%	16.5%	23.4%	14.9%	17.9%
Montcalm	63.8%	73.4%	13.4%	23.1%	8.8%	8.2%
Cluster Average	67.6%	76.1%	13.9%	23.4%	11.6%	12.3%
Michigan	68.0%	76.8%	15.7%	27.1%	14.3%	17.4%

***Unemployment Rate and Labor Force Participation Rate***

All three counties in this cluster have shown a steady, marked decrease in unemployment since the last recession, which ended in 1991. This is indicated in Table 4, which provides both a recent snapshot of unemployment in the cluster and in Michigan as well as information on change in number of unemployed persons since 1990. Montcalm stands out in that its unemployment rate remains stubbornly above that of Michigan. This has been the case since the early 1980s, although the exact gap between the



unemployment rate in Montcalm and in Michigan has varied somewhat. Many of the townships<sup>8</sup> in Mecosta, on the other hand, had low rates of unemployment in 1997.

No trend in the labor force participation rate is apparent in the last six years in these counties. The participation rate in Gratiot has been a couple of percentage points higher than that of the other two counties. The participation rate in all three counties has been slightly lower than Michigan's rate over this period.

**Table 4: Unemployment Information for the Value Added Cluster and Michigan**

County	Number 1997	Rate 1997	% Change in Number 1990 to 1997
Gratiot	1,100	5.8%	-34.3%
Mecosta	825	4.7%	-40.0%
Montcalm	1,800	7.3%	44.6%
Cluster Average		5.9%	-39.6%
Michigan		4.2%	-39.1%

### *Employment/Jobs*

As indicated in Table 5 below, each of the counties in this cluster added jobs between 1990 and 1996. The cluster average percentage change in number of jobs during this period was over five percentage points greater than the corresponding statistic for Michigan as a whole. This indicates that the cluster experienced a more robust economic recovery since the last recession than average for the state. It should be noted that the percentage change in the number of jobs was roughly twice as large in Mecosta and Montcalm compared to Gratiot. These two counties have also exhibited more steady job growth than Gratiot over the last 25 years.

An analysis of the jobs in a region should also consider the relative size of each of the sectors<sup>9</sup> in the region. Following is information identifying the largest sector in each cluster county in 1996, and its percentage of all jobs in the county: Gratiot - services (31%), Mecosta - government (26.4%), and Montcalm - manufacturing (24.8%). All three counties have shown a general trend of increase in the amount of service sector jobs over the past 25 years. The number of manufacturing jobs, on the other

---

<sup>8</sup> These low unemployment townships included: Austin, Big Rapids, Colfax, Deerfield, Grant, Mecosta, Millbrook and Wheatland.

<sup>9</sup> E.g. government, manufacturing, services, retail/wholesale, etc.

hand, has remained somewhat stagnant in each of the counties in this cluster. Farm employment as a percentage of all employment in the cluster is relatively high compared to Michigan's average. The trend in this particular sector of the cluster is not encouraging, however. The number of farm jobs in the cluster decreased by 914 between 1985 and 1996.

**Table 5: Change, Both in Number and on a Percentage Basis, in Full- and Part-time Employment in the Value Added Cluster and in Michigan.**

County	Change (number) '90-96	% Change '90-'96
Gratiot	1,644	9.5%
Mecosta	2,617	18.5%
Montcalm	4,302	20.2%
Cluster Average		16.07%
Michigan		9.90%

### *Personal Income*

From 1970 to 1996, total real personal income<sup>10</sup> increased in all three cluster counties. The increase in Gratiot was rather moderate. Montcalm showed a larger increase in real personal income over this period, while Mecosta had the largest increase among the counties of this cluster.

The source of personal income in a region also is relevant to economic development. This information for the Value Added Agriculture Cluster and Michigan is presented in Table 6. Specifically, the percentage of personal income from net earnings; dividends, interest, and rent; and transfer payments are listed. It stands out from the table that the percentage of personal income from net earnings in the cluster is lower than the corresponding figure for the state of Michigan. Conversely, the percentage of personal income in the cluster from dividends, interest, and rent in the cluster is higher than the corresponding figure for the state of Michigan. A possible explanation for these facts is that a relatively large portion of net income in the cluster is received in the form of rental income for farmland.

---

<sup>10</sup> Time series of dollar-denominated economic data may be presented and analyzed in two ways. One alternative is to simply list the actual, raw figures. The other is to adjust the figures for inflation, which produces data which is referred to as "real".

**Table 6: Major Sources of Personal Income for the Value Added Cluster and Michigan**

<i>Percent of Total Personal Income - 1996</i>			
County	Net Earnings	Dividends, Interest, & Rent	Transfer Payments
Gratiot	63.9%	21.0%	15.1%
Mecosta	60.3%	23.3%	16.4%
Montcalm	61.9%	22.6%	15.5%
Cluster Average	62.0%	22.3%	15.7%
Michigan	67.0%	17.5%	15.4%

### *Household Income*

The level of household income in a region gives an indication of the financial well being of its residents and of the amount of disposable income available to be spent on goods and services. A general conclusion of an examination of household income in the Value Added Agriculture Cluster is that it is a low income area. This conclusion is based in part on a comparison of the income distribution of the cluster with that of the state of Michigan. Table 7 provides information on the percentage of households in high and low income categories in the Value Added Agriculture Cluster and Michigan. As shown in the table, the percentage of households with a household income less than \$25,000 exceeds the state's percentage by 32%.<sup>11</sup> Furthermore, the percentage of households in the Value Added Agriculture Cluster with a household income greater than \$50,000 is only about half the corresponding percentage for the state of Michigan. The median household income in each of the three cluster counties was at least \$7,000 less than the state's median in 1989.

A couple of specific points regarding household income in the Value Added Agriculture Cluster should also be made. Over 37% of the households in Mecosta had an income of less than \$15,000 in 1989. Finally, the townships with median incomes in the highest category (>\$30,000) adjoined most of the primary towns. Examples include Eureka Township (near Greenville in Montcalm), North Shade Township (near Carson City in Gratiot), and Pine River Township (near Alma and St. Louis in Gratiot).

---

<sup>11</sup> This figure was calculated by taking the difference between the percentages in the two regions, and dividing the result by Michigan's percentage. I.e.  $(53.6\% - 40.6\%) \div 40.6\% = 32\%$ .

**Table 7: Percentages of Households in the Southern Tier and Michigan in Certain Income Categories**

<b>Household Income - 1990</b>		
County	% of Households \$0 - \$24,999	% of Households \$50,000+
Gratiot	50.9%	14.6%
Mecosta	57.9%	12.2%
Montcalm	52.1%	13.0%
Cluster Average	53.6%	13.3%
Michigan	40.6%	25.5%

***Poverty***

Table 8 gives the poverty rate for the Value Added Agriculture Cluster and Michigan. As indicated in the table, the poverty rate is higher in the cluster than the average for Michigan. The cluster average poverty rate actually exceeds Michigan's poverty rate by 38.1%.<sup>12</sup> Mecosta's poverty rate of 25.1% is particularly high. In Gratiot, the high poverty minor civil divisions are Alma, St. Louis, and Sumner Township. In Mecosta, they are Aetna Township, Big Rapids Township, Chippewa Township, Deerfield Township, Fork Township, Green Township, Mecosta Township, Sheridan Township, Wheatland Township, and the city of Big Rapids. In Montcalm, they are Belvidere Township, Crystal Township, Ferris Township, Richland Township, Reynolds Township, Carson City and Stanton.

---

<sup>12</sup> This figure was calculated as follows:  $(18.1\% - 13.1\%) \div 13.1\% = 38.1\%$ .

**Table 8: Poverty Rate in 1990 for the Value Added Cluster and Michigan**

County	Rate (in Percent)
Gratiot	14.1%
Mecosta	25.1%
Montcalm	15.1%
Cluster Average	18.1%
Michigan	13.1%

### *Household Composition*

The final category of socioeconomic data that will be discussed is household composition. Data on household composition in the Value Added Agriculture Cluster in 1980 and 1990 is given in Table 9. For nearly every county in the cluster, the percentage of household in the categories “Married, With Children” and “Married, Without Children” decreased over this period.<sup>13</sup> Another trend stands out from the table. The percentage in each of the other categories increased in each cluster county during this period. (The other categories are: Single Parent Family, Other Family Household, Single Person Household, and Other Non-family Household). These changes in living arrangements certainly will have impacts on social and community services in this region. For example, the increase in smaller households such as single person households will create a need for more housing that is suitable to such households. These trends in household composition were also observed in the other “Enhancing Rural Economies” clusters.<sup>14</sup>

---

<sup>13</sup> The only exception was Gratiot, which exhibited a slight increase in the percentage of households in the “Married, Without Children” category over this period.

<sup>14</sup> The other three clusters are the Southern Tier Cluster (Branch, Hillsdale, Lenawee, and St. Joseph), the Western U.P. Cluster (Baraga, Gogebic, Houghton, Iron, Keweenaw, and Ontonagon), and I-75 Cluster (Cheboygan, Crawford, Ogemaw, Otsego, and Roscommon).

**Table 9: Household Composition for the Value Added Cluster for the Years 1980 and 1990**

Married w/Children			Married w/o Children		Single Parent Family	
County	1980	1990	1980	1990	1980	1990
Gratiot	37.0%	30.3%	31.9%	32.7%	6.3%	8.7%
Mecosta	30.2%	25.3%	31.8%	30.7%	5.8%	8.0%
Montcalm	34.6%	30.6%	33.5%	31.9%	6.6%	9.9%
Cluster Average	33.9%	28.7%	32.4%	31.8%	6.2%	8.9%
Other Family HH			Single Person HH		Other Non Family	
County	1980	1990	1980	1990	1980	1990
Gratiot	3.3%	3.6%	19.1%	21.5%	2.4%	3.3%
Mecosta	3.4%	3.7%	18.7%	20.8%	10.0%	11.5%
Montcalm	3.4%	3.7%	19.4%	20.1%	2.6%	3.7%
Cluster Average	3.4%	3.7%	19.1%	20.8%	5.0%	6.2%